

Versions with markings to show changes made

-1- (Amended)

A composition for protecting cultivated plants comprising:

(a) at least one herbicide; and

(b) [a] repellent adjuvant selected from the  
5 group consisting of silane, silicone, siliconate and  
mixtures thereof which are organic for modifying surface properties of the composition so that retention of the composition on foliage of the cultivated plant is reduced.

-4- (Amended)

The composition of Claim 3 wherein the safener is selected from the group consisting of 4-  
(dichloroacetyl)-1-oxo-4-azapiro-(4,5)-decane [MON  
4660], 2,2-dichloro-N,N-di-2-propenylacetamide, 3-

5 dichloroacetyl-5-(2-furanyl)-2,2-dimethyl-oxazolidine, 2,2,5-trimethyl-N-dichloroacetyloxazolidine, 2,2-dimethyl-5-phenyl-N-dichloroacetyl oxazolidine, N,N-diallyl-2,2-dichloroacetamide, 2,2-dimethyl-5(2-furanyl)-N-dichloroacetyl oxazolidine, 2,2-dimethyl-5(2-thienyl)-N-dichloroacetyl oxazolidine, 2,2-spirocyclohexy-N-dichloroacetyl oxazolidine, 4-(dichloroacetyl)-3,4-dihydro-3-methyl-2H-1,4-benoxazine, 3-[3-(dichloroacetyl)-2,2-dimethyl-5-oxalidinyl]pyridine, 4-(dichloroacetyl)-1-oxa-4-azapiro-(4,5)-decane, 2,2-dichloro-1-(1,2,3,4-tetrahydro-1-methyl-2-

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isoquinolyl)ethanone, cis/trans-1,4-bis(dichloroacetyl)-  
2,5-dimethylpiperazine, N-(dichloroacetyl)-1,2,3,4-  
tetrahydroquinaldine, 1,5-bis(dichloroacetyl)-1,5-  
diazacyclononane, 1-(dichloroacetyl)-1-  
azaspiro[4,4]nonane, and combinations thereof.

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-12- (Amended)

The method of Claim 1 wherein the repellent [repellant] adjuvant is [selected from the group consisting of] an aqueous solution of sodium methyl silicate [and an aqueous solution of N-(2-aminoethyl)-  
5 3-aminopropyltrimethoxysilane and methyltrimethoxysilane].

-18- (Amended)

The composition of Claim 17 wherein the safener is selected from the group consisting of benoxacor, flurilizole, dichlormid and 4- (dichloroacetyl)-1-oxo-4-azaspiro-(4,5)-decane [MON 4660].

A method for protecting crop plants without injuring crop plants, the steps comprising:

(a) providing a herbicidal formulation comprising at least one herbicide admixed with a repellent adjuvant selected from the group consisting of silane, silicone, siliconate and mixtures thereof which are organic wherein the repellent [repellant] adjuvant modifies surface properties of the formulation thereby reducing retention of the formulation on foliage of crop plants; and

(b) applying the formulation to the crop plants wherein the formulation bounces off the foliage onto the soil wherein the formulation protects the crop plants without injuring the crop plants.

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A method for inhibiting a weed without injuring turfgrass, the steps comprising:

(a) providing a liquid dispersion of a herbicidal formulation comprising at least one herbicide admixed with a repellent adjuvant which is an organosiliconate wherein the repellent [repellant] adjuvant modifies surface properties of the formulation thereby reducing retention of the formulation on foliage of the turfgrass; and

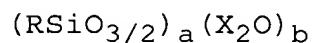
(b) applying the formulation to the turfgrass wherein the formulation bounces off the foliage onto the soil wherein the formulation inhibits growth of the weed.

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The method of Claim 27 wherein the safener  
is selected from the group consisting of 4-  
(dichloroacetyl)-1-oxo-4-azaspiro-(4,5)-decane [MON  
4660], 2,2-dichloro-N,N-di-2-propenylacetamide, 3-  
5 dichloroacetyl-5-(2-furanyl)-2,2-dimethyl-oxazolidine,  
2,2,5-trimethyl-N-dichloroacetyloxazolidine, 2,2-  
dimethyl-5-phenyl-N-dichloroacetyl oxazolidine, N,N-  
diallyl-2,2-dichloroacetamide, 2,2-dimethyl-5(2-furanyl)-  
N-dichloroacetyl oxazolidine, 2,2-dimethyl-5(2-thienyl)-  
10 N-dichloroacetyl oxazolidine, 2,2-spirocyclohexy-N-  
dichloroacetyl oxazolidine, 4-(dichloroacetyl)-3,4-  
dihydro-3-methyl-2H-1,4-benoxazine, 3-[3-  
(dichloroacetyl)-2,2-dimethyl-5-oxalidinyl]pyridine, 4-  
(dichloroacetyl)-1-oxa-4-azapiro-(4,5)-decane, 2,2-  
15 dichloro-1-(1,2,3,4-tetrahydro-1-methyl-2-  
isoquinolyl)ethanone, cis/trans-1,4-bis(dichloroacetyl)-  
2,5-dimethylpiperazine, N-(dichloroacetyl)-1,2,3,4-  
tetrahydroquinaldine, 1,5-bis(dichloroacetyl)-1,5-  
diaza cyclononane, 1-(dichloroacetyl)-1-  
20 azaspiro[4,4]nonane, and combinations thereof.

The method of Claim [24 or] 25 wherein the repellent [repellant] adjuvant is an aqueous solution of an organosiliconate which has the formula

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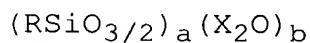
wherein X denotes sodium or potassium, and R is methyl, ethyl, or propyl, and the ratio of Si:X is about 1:1.

A method for applying one or more postemergence herbicides for controlling weeds to a crop plant without injuring the crop plant, the steps comprising:

- 5                     (a) providing a composition comprising at least one herbicide admixed with a repellent adjuvant which is an organosiliconate wherein the repellent [repellant] adjuvant modifies surface properties of the formulation thereby reducing retention of the formulation  
10                     on foliage of crop plants; and
- (b) applying the formulation to the plants wherein the formulation bounces off the foliage onto the soil wherein the formulation controls the weeds without injuring the crop plant.

The method of Claim 45 wherein the  
repellent [repellant] adjuvant is an aqueous solution  
of the [an] organosiliconate which has the formula

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wherein X denotes sodium or potassium, and R is methyl,  
ethyl, or propyl, and the ratio of Si:X is about 1:1.

100-200-300-400-500-600-700-800-900

The method of Claim 55 wherein the safener  
is selected from the group consisting of 4-  
(dichloroacetyl)-1-oxo-4-azapiro-(4,5)-decane [MON  
4660], 2,2-dichloro-N,N-di-2-propenylacetamide, 3-  
5 dichloroacetyl-5-(2-furanyl)-2,2-dimethyl-oxazolidine,  
2,2,5-trimethyl-N-dichloroacetyloxazolidine, 2,2-  
dimethyl-5-phenyl-N-dichloroacetyl oxazolidine, N,N-  
diallyl-2,2-dichloroacetamide, 2,2-dimethyl-5(2-furanyl)-  
N-dichloroacetyl oxazolidine, 2,2-dimethyl-5(2-thienyl)-  
10 N-dichloroacetyl oxazolidine, 2,2-spirocyclohexy-N-  
dichloroacetyl oxazolidine, 4-(dichloroacetyl)-3,4-  
dihydro-3-methyl-2H-1,4-benoxazine, 3-[3-  
(dichloroacetyl)-2,2-dimethyl-5-oxalidinyl]pyridine, 4-  
(dichloroacetyl)-1-oxa-4-azapiro-(4,5)-decane, 2,2-  
15 dichloro-1-(1,2,3,4-tetrahydro-1-methyl-2-  
isoquinolyl)ethanone, cis/trans-1,4-bis(dichloroacetyl)-  
2,5-dimethylpiperazine, N-(dichloroacetyl)-1,2,3,4-  
tetrahydroquinaldine, 1,5-bis(dichloroacetyl)-1,5-  
diaza cyclononane, 1-(dichloroacetyl)-1-  
20 azapiro[4,4]nonane, and combinations thereof.

A composition for protecting cultivated plants comprising:

(a) an acetochlor herbicide;

(b) a safener selected from the group

5 consisting of 4-(dichloroacetyl)-1-oxo-4-azaspiro-(4,5)-decane [MON 4660], 2,2-dichloro-N,N-di-2-propenylacetamide, 3-dichloroacetyl-5-(2-furanyl)-2,2-dimethyl-oxazolidine, 2,2,5-trimethyl-N-dichloroacetyloxazolidine, 2,2-dimethyl-5-phenyl-N-dichloroacetyl oxazolidine, N,N-diallyl-2,2-dichloroacetamide, 2,2-dimethyl-5(2-furanyl)-N-dichloroacetyl oxazolidine, 2,2-dimethyl-5(2-thienyl)-N-dichloroacetyl oxazolidine, 2,2-spirocyclohexy-N-dichloroacetyl oxazolidine, 4-(dichloroacetyl)-3,4-dihydro-3-methyl-2H-1,4-benoxazine, 3-[3-(dichloroacetyl)-2,2-dimethyl-5-oxalidinyl]pyridine, 4-(dichloroacetyl)-1-oxa-4-azapiro-(4,5)-decane, 2,2-dichloro-1-(1,2,3,4-tetrahydro-1-methyl-2-isoquinolyl)ethanone, cis/trans-1,4-bis(dichloroacetyl)-2,5-dimethylpiperazine, N-(dichloroacetyl)-1,2,3,4-tetrahydroquinaldine, 1,5-bis(dichloroacetyl)-1,5-diazacyclononane, 1-(dichloroacetyl)-1-azaspiro[4,4]nonane, and combinations thereof; and

25 (c) a repellent adjuvant which is an organosiliconate for modifying surface properties of the composition so that retention of the composition on foliage of the cultivated plant is reduced.

A composition for protecting cultivated plants comprising:

(a) one or more of a herbicide selected from the group consisting of nicosulfron, glyphosphate [isopropyl amine salt], glyphosphate, primisulfron, chlorimuron, glufosinate-ammonium salt, linuron, linuron and chlorimuron ethyl, thifensulfuron, imazethapyr, imazaquin, acetochlor, alachlor, S-ethyldipropylthiocarbonate, [glyphoshatetrimethylsulfonium salt,] isoxaflutole, flufenacet, metalachlor, and combinations thereof; and

(b) a repellent adjuvant which is an organosiliconate for modifying surface properties of the composition so that retention of the composition on foliage of the cultivated plant is reduced.

The composition of Claim 59 wherein the safener is selected from the group consisting of 4-(dichloroacetyl)-1-oxo-4-azaspiro-(4,5)-decane [MON 4660], 2,2-dichloro-N,N-di-2-propenylacetamide, 3-dichloroacetyl-5-(2-furanyl)-2,2-dimethyl-oxazolidine, 2,2,5-trimethyl-N-dichloroacetyloxazolidine, 2,2-dimethyl-5-phenyl-N-dichloroacetyl oxazolidine, N,N-diallyl-2,2-dichloroacetamide, 2,2-dimethyl-5(2-furanyl)-N-dichloroacetyl oxazolidine, 2,2-dimethyl-5(2-thienyl)-N-dichloroacetyl oxazolidine, 2,2-spirocyclohexy-N-dichloroacetyl oxazolidine, 4-(dichloroacetyl)-3,4-dihydro-3-methyl-2H-1,4-benoxazine, 3-[3-(dichloroacetyl)-2,2-dimethyl-5-oxalidinyl]pyridine, 4-(dichloroacetyl)-1-oxa-4-azapiro-(4,5)-decane, 2,2-dichloro-1-(1,2,3,4-tetrahydro-1-methyl-2-isoquinolyl)ethanone, cis/trans-1,4-bis(dichloroacetyl)-2,5-dimethylpiperazine, N-(dichloroacetyl)-1,2,3,4-tetrahydroquinaldine, 1,5-bis(dichloroacetyl)-1,5-diazacyclononane, 1-(dichloroacetyl)-1-azaspiro[4,4]nonane, and combinations thereof.

A composition for protecting cultivated plants comprising:

(a) a herbicide which is isooxaflutole [S-ethyldipropylthio-carbonate];

5 (b) a safener which is 2,2,5-trimethyl-N-dichloro-acetyloxazolidine; and

10 (c) a repellent adjuvant which is an organosiliconate for modifying surface properties of the composition so that retention of the composition on foliage of the cultivated plant is reduced.

A composition for protecting cultivated plants comprising:

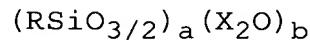
(a) a herbicide which is halosulfuron;

5 (b) a safener which is 3-dichloroacetyl-5-(2-furanyl)-2,2-dimethyloxazolidine; and

(b) a repellent adjuvant which is an organosiliconate for modifying surface properties of the composition so that retention of the composition on foliage of the cultivated plant is reduced.

The composition of any one of Claims 57, 58, 59, 60, 61, or 62 wherein the repellent [repellant] adjuvant is an aqueous solution of the [an] organosiliconate which has the formula

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wherein X denotes sodium or potassium, and R is methyl, ethyl, or propyl, and the ratio of Si:X is about 1:1.